

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-8. (Cancelled)

Claim 9 (new): A rotational speed sensor comprising a rotatable ring, the rotational speed sensor having K magnetic pole pairs distributed angularly over the rotatable ring, K being an integer greater than one, and sensor means positioned relative to the rotatable ring such that a varying magnetic field is detected by the sensor means, the sensor means comprising at least a first pair of magnetic sensors, the first pair of magnetic sensors being positioned $2\pi L/K$ radians apart from each other, L being an integer between 1 and K-1, wherein the sensor means comprise at least one second pair of magnetic sensors, the second pair of sensors being positioned $2\pi M/K$ radians apart from each other, M being an integer between 1 and K-1, the first pair of sensors and second pair of sensors being positioned at a relative position of $(2\pi/K)*((2n-1)/2)$ radians, n being an integer greater than one.

Claim 10 (new): The rotational speed sensor according to claim 9, wherein K is an even integer value and L is equal to K/2.

Claim 11 (new): The rotational speed sensor according to claim 9, wherein the sensor means further comprise an additional magnetic sensor, positioned at $(2\pi/K)*((2m-1)/4)$ radians from the first or second pair of magnetic sensors, m being an integer greater than one.

Claim 12 (new): The rotational speed sensor according to claim 11, wherein each of the first pair of magnetic sensors, the second pair of magnetic sensors, and the additional sensor is a Hall type sensor.

Claim 13 (new): The rotational speed sensor according to claim 9, wherein the rotational speed sensor is connectable to signal processing means, the signal processing means being arranged to add the signals from the first pair of magnetic sensors to obtain a first sensor pair signal.

Claim 14 (new): The rotational speed sensor according to claim 9, wherein the rotational speed sensor is connectable to signal processing means, the signal processing means being arranged to add the signals from the first pair of magnetic sensors to obtain a first sensor pair signal and to add the signals from the second pair of magnetic sensors to obtain a second sensor pair signal and to subsequently subtract the second pair signal from the first pair signal.

Claim 15 (new): The rotational speed sensor according to claim 11, wherein the rotational speed sensor is connectable to signal processing means, the signal processing means being arranged to add the signals from the first pair of magnetic sensors and/or the second pair of magnetic sensors to obtain a first sensor pair signal and/or a second sensor pair signal, respectively, and the signal processing means are arranged for determining a speed direction from the first sensor pair signal and/or the second pair signal and the signal from the additional magnetic sensor.

Claim 16 (new): The rotational speed sensor according to claim 13, wherein the sensor means and the signal processing means are integrated.

Claim 17 (new): The rotational speed sensor according to claim 14, wherein the sensor means and the signal processing means are integrated.

Claim 18 (new): The rotational speed sensor according to claim 15, wherein the sensor means and the signal processing means are integrated.